
KNOTT COUNTY

(Knott County Water Service Area Map)

- Estimated 1999 population of 17,500--14% on public water
- Estimated 2020 population of 17,300--57% on public water
- 54 miles of water lines, with plans for 300 additional miles
- Estimated funding needs for public water 2000-2005--\$18,488,000
- Estimated funding needs for public water 2006-2020--\$16,300,000

Knott County had an estimated population of 17,471 (6,587 households) in 1999 with a projected population of 17,300 (7,300 households) in 2020. Public water is provided to 890 customers, or about 14 percent of the county's residents. In areas of the county not served by public water, about 93 percent of the households rely on private domestic wells and 7 percent of the households rely on other sources. About 3,160 customers will be added to public water service through new line extensions in 2000-2020.

Along with several planned expansions into residential areas, the county also contains a site for a proposed prison that could eventually need 500,000 gpd of potable water. Current sources of water and plant capacities are unable to meet this demand. Both the City of Hindman and the Caney Creek Water District have passed resolutions of intent to form the Carr Creek Water Commission. The City of Vicco and The Letcher County Water and Sewer District has also passed the same resolutions. The commission would have the authority to wholesale treated water from a proposed treatment plant at the Carr Creek Lake in Knott County. Early estimates from the Corps of Engineers indicate that approximately two million gallons per day could be withdrawn for each of the participating counties of Knott, Letcher, and Perry. This plant, along with existing sources, could supply Knott County's needs well into the foreseeable future.

It is also the intention of Knott County to expand the Caney Creek Water District into a countywide district. Therefore, future water needs of rural Knott County would be met by this entity. Also, the projects listing following this summary may or may not have the accurate project owner. Since the expansion of the district is not complete, this report assumes the City of Hindman to be the owner of the most current projects listed.

WATER SERVICE AREAS

KNOTT COUNTY

Kentucky

Prepared By:
Water Resource Development Commission

Department for Local Government
1024 Capital Center Drive, Suite 340
Frankfort, Kentucky 40601-8204
502-573-2382 -- 502-573-2939 fax
<http://dlgnt1.state.ky.us/wrdc/>

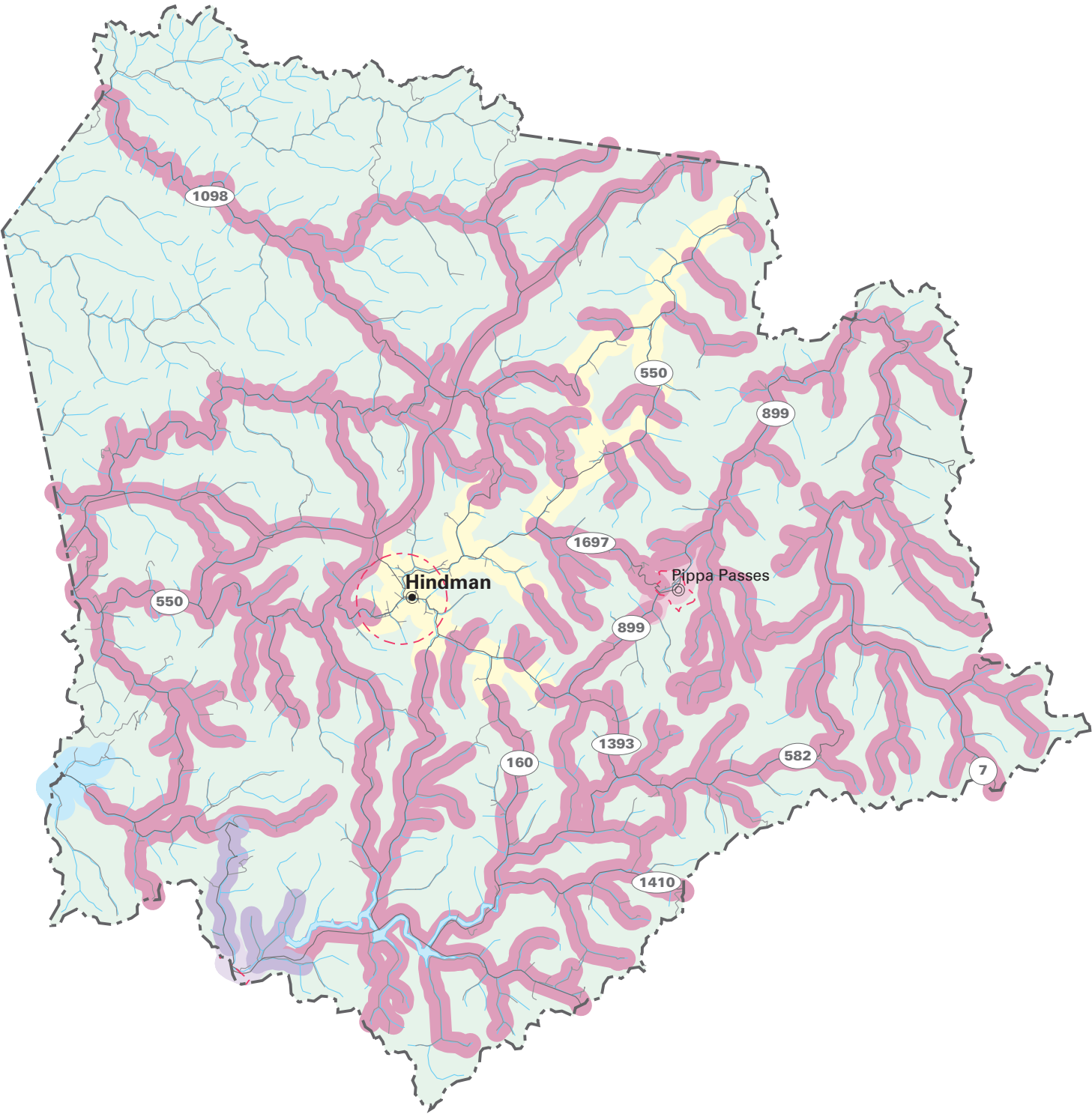
Bob Arnold, Chairman
Lawrence Wetherby, Executive Director



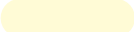

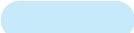



Final GIS & Cartographic Operations By:
Kent Anness & Kim Prough

Data Collection & GIS Input By:
Kentucky Area Development Districts



LIMITATION OF LIABILITY: The Water Resource Development Commission has no reason to believe that there are any inaccuracies or defects in information incorporated in this work and make no representations of any kind, including, but not limited to, the warranties of merchantability or fitness for a particular use, nor any such warranties to be implied, with respect to the information or data furnished herein.



WATER SERVICE STATUS BY OWNER			
EXISTING SERVICE AREA	PROPOSED SERVICE AREA		
		VICCO WATER SUPPLY	
		HINDMAN WATER DEPARTMENT	
		HAZARD WATER DEPARTMENT	
		CANEY CREEK WATER DISTRICT	

Estimated Costs - Proposed Projects, 2000-2005

COUNTY/System		New Customers		Rehab	Source	Treatment	Tanks/ Pumps	Total
	Miles	Number	Cost in \$1000	In \$1000	in \$1000	in \$1000	in \$1000	in \$1000
KNOTT								-
Hindman	2.8	50	88				500	588
Knott County W D	121.3	1,585	8,000		3,000	6,000	900	17,900
Total	124.1	1,635	8,088		3,000	6,000	1,400	18,488

Estimated Costs - Proposed Projects, 2006-2020

COUNTY/System		New Customers		Rehab	Source	Treatment	Tanks/ Pumps	Total
	Miles	Number	Cost in \$1000	in \$1000	in \$1000	in \$1000	in \$1000	in \$1000
KNOTT								-
Hindman								-
Knott Co.	170.0	1,520	9,500			5,000	1,800	16,300
Total	170.0	1,520	9,500			5,000	1,800	16,300

PUBLIC WATER SYSTEMS

The residents of Knott county are served by 35 public and semi-public water systems: 2 municipal systems, the Hindman Water System and the City of Vicco; 1 water district, Caney Creek Water District; 3 private community systems; and 19 non-community systems.

The water sources for the City of Hindman and the Caney Creek Water District are wells.

HINDMAN WATER DEPARTMENT

PWSID: 0600198
 System Type:..... COMMUNITY
 Owner Type:..... MUNICIPAL
 Surface Source:
 Purchase Source: BEAVER ELKHORN MASTER METER
 Well Source: Yes
 Sells Water to:
 Treatment Plant Capacity (MGD):..... 0.32
 Percent Daily Average Production:..... 59.00
 Total Tank Storage Capacity (gallons): 205,000.00
 Total Service Connections: 550.00
 Number of Employees:..... 3.00
 Treatment Operator Class: 1D
 Distribution Operator Class:..... 2A
 Customer Rate for 1,000 Gallons:..... 5.20
 O/M costs 1997:..... Not available
 O/M costs per Service Connection: Not available
 Net Revenue 1997: Not available
 Total Water Produced 1997 (gallons):..... Not available
 Water Sold 1997 (gallons):..... Not available
 Unaccounted-for Water 1997 (%): Not available

The Hindman Water System gets its water from 2 underground wells. The system currently serves about 550 customers. Permitted withdrawal from the wells is 323,000 gpd and the average daily withdrawal is 106,000 gallons. In addition, the city purchases 1,100,000 gallons a month from Beaver Elkhorn Water in Floyd County to serve customers on Hwy 550 east of Hindman to the Floyd County line. The Hindman Water System operates a treatment plant with a capacity of 323,000 gpd. Current storage capacity for the system is 205,000 gallons. Current rates are \$26.00 per 5,000 gallons. The Hindman Water System employs 3 people.

CANEY CREEK WATER DISTRICT

PWSID: 0600062
System Type: COMMUNITY
Owner Type: WATER DISTRICT
Surface Source:
Purchase Source:
Well Source: Yes
Sells Water to:
Treatment Plant Capacity (MGD): 0.10
Percent Daily Average Production: 60.00
Total Tank Storage Capacity (gallons): 208,000.00
Total Service Connections: 108.00
Number of Employees: 1.00
Treatment Operator Class: 1D
Distribution Operator Class: 2A
Customer Rate for 1,000 Gallons: 3.42
O/M costs 1997: 57,338.00
O/M costs per Service Connection: 473.87
Net Revenue 1997: 50,314.00
Total Water Produced 1997 (gallons): 18,683,200.00
Water Sold 1997 (gallons): 15,747,000.00
Unaccounted-for Water 1997 (%): 0.76

The Caney Creek Water District gets its water from 8 underground wells. The system currently serves 108 customers, including Alice Lloyd College. They have a plant capacity of 100,000 gpd with an average daily production of 80,000 gallons. Current storage capacity is 208,000. Rates are a \$12.38 minimum for the first 2,000 gallons. They have one full time employee.

CITY OF VICCO

The City of Vicco, in Perry County, serves about 30 households in the extreme southwestern section of Knott County.

OTHER SYSTEMS

JAMESTOWN VILLAGE MOBILE HOME PARK

Jamestown Village Mobile Home Park is located in Knott County. The system serves a population of 327 and has 99 service connections. The private, community system has treatment capacity of 57,600 gallons per day and the water source is wells.

BEAVER CREEK ELEMENTARY SCHOOL

Beaver Creek Elementary School is located in Knott County. The system serves a population of 475 and has 1 service connection. The local, non-transient, non-community system has treatment capacity of 4,0000 gallons per day and the water source is wells.

HOLLY HILLS SHOPPING CENTER

Holly Hills Shopping Center is located in Knott County. The system serves a population of 300 and has 12 service connections. The private, transient, non-community system has treatment capacity of 15,000 gallons per day and the water source is wells.

EMMALENA ELEMENTARY SCHOOL

Emmalena Elementary School is located in Knott County. The system serves a population of 341 and has 1 service connection. The local, non-transient, non-community system has treatment capacity of 30,000 gallons per day and the water source is wells

HINDMAN ELEMENTARY SCHOOL

Hindman Elementary School is located in Knott County. The system serves a population of 650 and has 1 service connection. The local, non-transient, non-community system has treatment capacity of 48,000 gallons per day and the water source is wells.

KNOTT COUNTY BOARD OF EDUCATION BUILDING

Knott County Board of Education Building is located in Knott County. The system serves a population of 100 and has 1 service connection. The local, non-transient, non-community system has treatment capacity of 8000 gallons per day and the water source is wells.

JONES FORK ELEMENTARY SCHOOL

Jones Fork Elementary School is located in Knott County. The system serves a population of 240 and has 1 service connection. The local, non-transient, non-community system has treatment capacity of 15,000 gallons per day and the water source is wells.

CARR CREEK ELEMENTARY SCHOOL

Carr Creek Elementary School is located in Knott County. The system serves a population of 720 and has 2 service connections. The local, non-transient, non-community system has treatment capacity of 49,000 gallons per day and the water source is wells.

BECKHAM COMBS ELEMENTARY SCHOOL

Beckham Combs Elementary School is located in Knott County. The system serves a population of 250 and has 1 service connection. The local, non-transient, non-community system has treatment capacity of 32,000 gallons per day and the water source is wells.

CAMP NATHANIEL

Camp Nathaniel is located in Knott County. The system serves a population of 200 and has 21 service connections. The private, transient, non-community system has treatment capacity of 32,000 gallons per day and the water source is wells.

CARR CREEK STATE RESORT PARK

Carr Creek State Resort Park is located in Knott County. The system serves a population of 300 and has 3 service connections. The federal, transient, non-community system has treatment capacity of 24,000 gallons per day. The water source is surface water from a surface impoundment.

CORPS OF ENGRS/DAM SITE

Corps Of Engrs/Dam Site is located in Knott County. The system serves a population of 692 and has 5 service connections. The federal, transient, non-community system has treatment capacity of 40,000 gallons per day and the water source is wells.

CORPS OF ENGRS/LITTCARR

Corps Of Engrs/Littcarr is located in Knott County. The system serves a population of 100 and has 5 service connections. The federal, transient, non-community system has treatment capacity of 24,000 gallons per day and the water source is wells.

CANEY CREEK ELEM SCHOOL

Caney Creek Elem School is located in Knott County. The system serves a population of 200 and has 1 service connection. The local, non-transient, non-community system has treatment capacity of 15,000 gallons per day and the water source is wells.

MOUNTAIN DENTAL SERVICES

Mountain Dental Services is located in Knott County. The system serves a population of 15 and has 15 service connections. The private, transient, non-community system water source is wells.

HINDMAN KWIK MART

Hindman Kwik Mart is located in Knott County. The system serves a population of 100 and has 1 service connection. The private, transient, non-community system has treatment capacity of 5,000 gallons per day. The water source is rain water from a cistern.

LAKEVIEW HEADSTART

Lakeview Headstart is located in Knott County. The system serves a population of 75 and has 1 service connection. The local, non-transient, non-community system has treatment capacity of 7,500 gallons per day and the water source is wells.

BEARVILLE MARKET

Bearville Market is located in Knott County. The system serves a population of 100 and has 1 service connection. The private, transient, non-community system has treatment capacity of 12,000 gallons per day and the water source is wells.

HINDMAN DAIRY CHEER

Hindman Dairy Cheer is located in Knott County. The system serves a population of 25 and has 1 service connection. The private, transient, non-community system has treatment capacity of 6,000 gallons per day and the water source is wells.

HWY 80 MOTEL

Hwy 80 Motel is located in Knott County. The system serves a population of 25 and has 15 service connections. The private, transient, non-community system has treatment capacity of 6,000 gallons per day and the water source is wells.

RED FOX MINI MART & RESTAURANT

Red Fox Mini Mart & Restaurant is located in Knott County. The system serves a population of 25 and has 2 service connections. The private, transient, non-community system water source is wells.

MOUSIE MARKET

Mousie Market is located in Knott County. The system serves a population of 75 and has 2 service connections. The private, transient, non-community system water source is wells.

PRIVATE DOMESTIC SYSTEMS

About 15,000 people, or 6 of 7 households, in Knott county rely on private domestic water systems: 14,000 on wells and 1,000 on other sources.

Of those, about 84 percent rely on drilled wells, 9 percent on dug wells, and 7 percent on cisterns and other sources. The primary problem with private wells in Knott County is high levels of sulfur or iron.

Most wells drilled in valley bottoms and on hillsides are adequate for modern domestic supply; however, on ridge tops, only some wells are adequate for modern domestic use in terms of water quantity. Wells drilled in valleys to depths greater than 200 feet may yield enough water for small municipal or industrial supplies.

Ground water from most wells is considered moderately hard and contains noticeable amounts of iron. In the drainage basin of the Right Fork of Beaver Creek, of southeastern Knott County, salty water may be found at depths less than 100 feet below the level of the valley bottom. In the rest of Knott County salty water in wells probably will not be found less than 200 feet below the level of the principal valley bottoms.

A few springs supply sufficient quantities of water for domestic use, usually less than 5 gpm.
